

ABSTRACT OF THE DISCLOSURE

A printer head using a radio frequency micro-electromechanical system (RF MEMS) sprayer includes an inner pressure chamber having a liquid inlet and a liquid outlet; a cavity resonator surrounding the inner pressure chamber, wherein the cavity resonator inputs a predetermined cavity resonance frequency signal to increase an inner pressure of the inner pressure chamber; a signal transmitting unit for generating the predetermined cavity resonance frequency signal and for inputting the generated cavity resonance frequency signal into the inner pressure chamber through the cavity resonator in response to an external input control signal; and a liquid chamber for supplying a liquid, wherein the liquid inlet and the liquid outlet each extend through the inner pressure chamber and the cavity resonator so that when an inner pressure of the inner pressure chamber is increased by the cavity resonator, a liquid from within the inner pressure chamber is ejected.